

Best Management Practices (BMPs) For Fluid Minerals – Part 1

INTRODUCTION Why Best Management Practices?

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Our Goal:

Sustainable Energy Development

Meeting the resource needs of the current generation, without compromising the ability of future generations to meet their resource needs.

To sustain energy development we must have public support..... or we will lose the opportunity to develop energy minerals on much of the public's lands.



Key Concept:

Oil & Gas Exploration and Production is a long-term, but **not a permanent** use of the Public Land

Resources at Pre-Development:

Wildlife; Soils; Water; Air; Recreation; Visual; Vegetation; Grazing; etc.



Energy; Wildlife; Soils; Water; Air; Recreation; Visual; Vegetation; Grazing; etc.

(Energy Development may temporarily dominate an area, but must also co-exist with other resources and resource uses.)

Resources at Field Reclamation Phase:

Wildlife; Soils; Water; Air; Recreation; Visual; Vegetation; Grazing; etc.

(Over time, nearly all traces of energy development should be erased.)





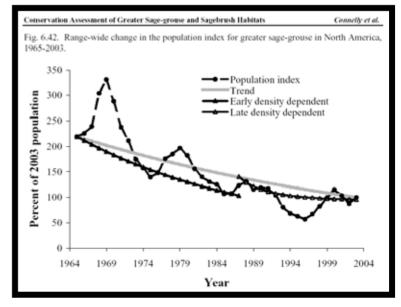


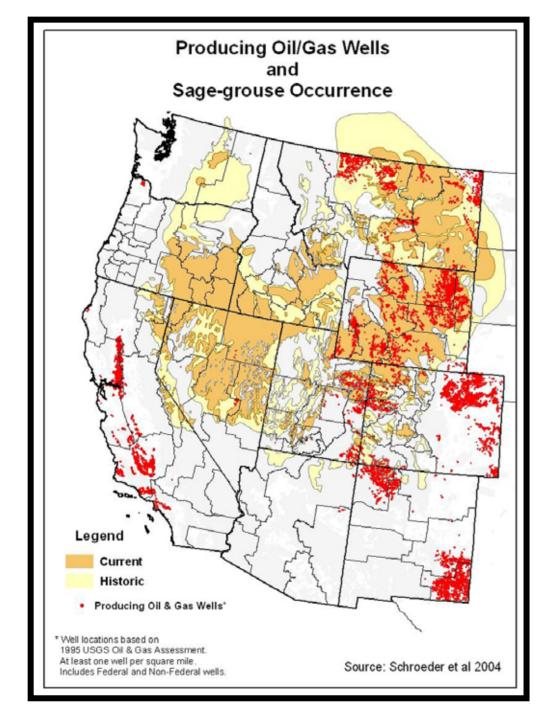
Sage-grouse



Status of the Species

The US Fish & Wildlife Service is currently in the process of conducting a status review of the Greater Sage-grouse, to determine if it should be listed as an endangered species.





Who may be affected if the Greater Sage-grouse is "listed" as an endangered species?

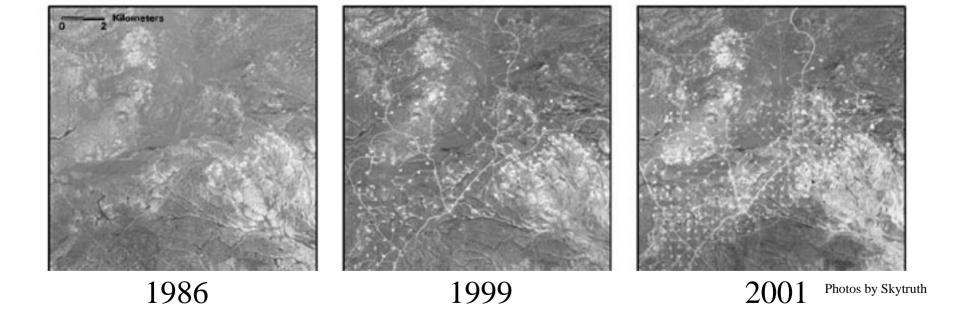
- A significant amount of energy production (as well as other uses) takes place within Sage-grouse habitat.
- Listing a species reduces flexibility, increases costs, and lengthens decision times in managing energy resources.

What Does the Public Want to See?



What the Public Sees

Increasing Development in Some Locations



What the Public Sees



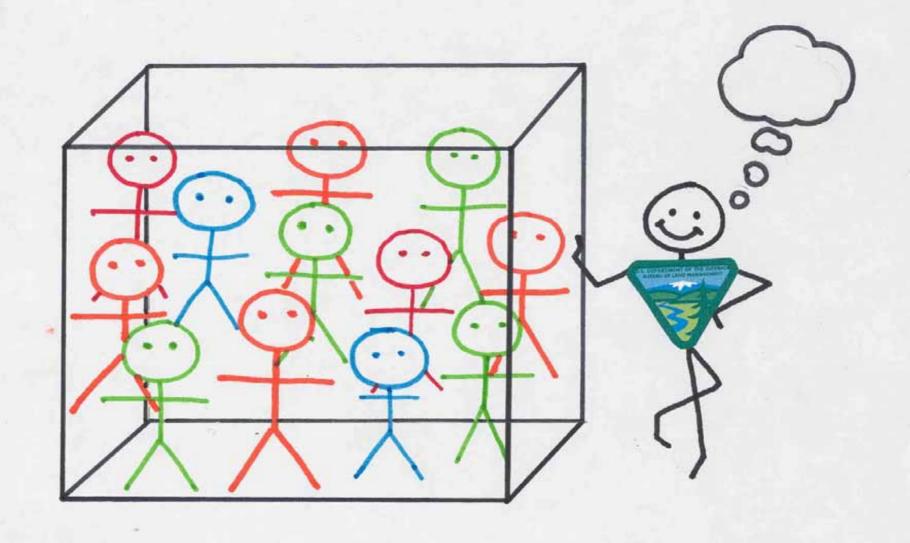
Oil on the Pad and in the Pit

(Private land)

(WY Outdoor Council Web Site)

Old Well Located Along a National Historic Trail





THE BOX YOU

We need to think outside of "The Box." How can we do things better?

Yet, always taking into account what is <u>reasonable</u>, <u>necessary</u>, and <u>effective</u>.



Best Management Practices (BMPs) "Improved Actions for Achieving Improved Results"

Siting or Location - Behind the Hill or Ridge	Color Selection - Blend with Background, Juniper Green*	Reducing Unnecessary Disturbance - Roads and pads
Interim Reclamation – Up to the Wellhead	Plans of Development (PODs)	Reduce Traffic – Centralized Production Facilities
Reclamation - Original Contour	Siting – Non- Linear Roads following the topography	Wastes and Spills – Bioremediation

Note: A BMP suitable for use in one area, may not be suitable in the next. It is not "one size fits all." It is the best practice to meet the needs of the situation.

Why BMPs?

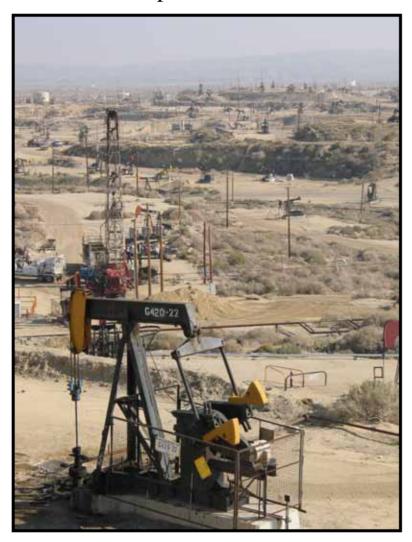
- History of Successful Use in Many BLM Offices.
- Protect: Wildlife Habitat, Forage, Water, etc.
- Land Health Standards Found in all Land Use Plans.
- Minimal Cost or Even Cost Savings.
- Amount to a Very Small Portion of the Cost of Drilling A Well.
- Public Concerns Result in Increased Comments, Protests, Appeals, & Litigation.
- It is the Right Thing to Do!

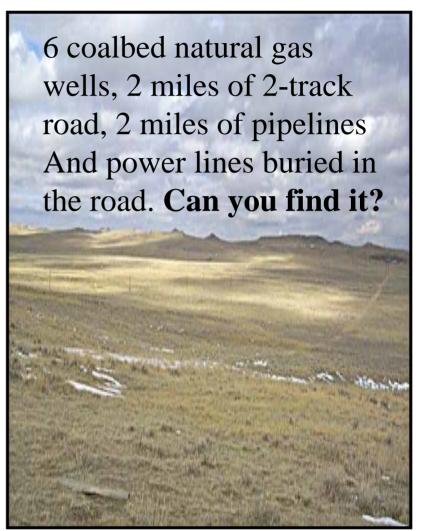
This eagle was electrocuted because raptor perch avoidance BMPs were not used.



Traditional Development vs. BMP Development?

Both Photos Represent Extremes – Yet we can learn a lot from the photo on the right.





Our Goal: To Minimize the Footprint of Oil and Gas Operations

How Do We Get There?

• Baseline Inventories, Monitoring, Follow-up, Good Science, Experience

• Land Use Planning Resulting in Protective Lease

Stipulations.

- Early Coordination between BLM and the Operator.
 - Pre-Development Planning
 - Sensitive Area Avoidance
 - Minimizing Impacts
 - Standard Operating Practices
- BLM Receives Outstanding **APDs Containing BMPs!**
- Necessary BMPs Not Included Within the APD can be attached to it as COAs



APDs = Applications for Permit to Drill COAs = Conditions of Approval

Continue on to the next chapters for.....

Part 2 Use BMPs to: Minimize Wildlife Habitat Fragmentation

Typical BMPs May Include:

- Minimizing Roads, Utilities, & Well Pads
- Drilling Multiple Wells from a Single Well Pad
- Interim Reclamation
- Reducing Noise
- Remote Production Monitoring
- Centralized Production Facilities

Part 3 Use BMPs to Enhance: Visual Resource Management

Typical BMPs May Include:

- Repeating Elements of Form, Line, Color, & Texture
- Proper Siting or Location of Roads & Well Pads
- Vegetative Manipulation
- Proper Selection of Structures
- Reducing Unnecessary Disturbance
- Reclamation/Restoration

Part 4 Use BMPs to Enhance: Construction, Operations, & Reclamation

Typical BMPs May Include:

- Pre-Permitting Meetings with the Operator
- Proper Construction Techniques
- Interim Reclamation of Producing Well Pads
- Maintenance of Production Facilities
- Full Site Reclamation at the Final Abandonment Stage



For actual examples of BMPs, continue on with Parts 2, 3, and 4.